

**ENVIRONMENTAL RESOLUTIONS, INC.**

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January 25, 2004  
ERI 261905JF.L01

Ms. Joan Fleck  
North Coast Regional Water Quality Control Board  
5550 Skylane Boulevard, Suite A,  
Santa Rosa, California 95403

Subject: Notification of Remedial Activities to be conducted at 1855 Guerneville Road, Santa Rosa, California.

Ms. Fleck:

At the request of Redwood Oil Company (Redwood Oil), Environmental Resolutions, Inc. (ERI) has prepared this letter to notify the North Coast Regional Water Quality Control Board (NCRWQCB) of remedial activities to be conducted at the above mentioned site. A five-day feasibility soil-vapor extraction (SVE) event is scheduled to investigate residual vapor-phase petroleum hydrocarbon concentrations in the vicinity of well MW7.

The site is currently an operating Redwood Oil service station with one 15,000-gallon and one 12,000-gallon double walled fiberglass underground storage tanks (USTs), four dispenser islands, and a convenience store and is shown on the Generalized Site Plan (Plate 1). The site is located within a mixed residential and commercial area of Santa Rosa. Groundwater monitoring and sampling has been conducted since September, 1989 (Table 1). Three additional leaking underground fuel tank (LUFT) cases are reported within 1,000 feet of the site (GeoTracker.com). Directly west of the site is an operating Shell Oil service station and car wash. ConocoPhillips Inc. has an open case located at the south west corner of the intersection, and a dry cleaner facility is located directly south of the site.

Remediation has been conducted since the installation of passive bailers for liquid phase hydrocarbon removal in November, 1991. An SVE and groundwater extraction (GWE) system installed in 1995 removed approximately 3,142,000 gallons of water, 32.7 pounds of petroleum hydrocarbons as gasoline and 0.54 pounds of methyl tertiary butyl ether (MTBE) (Table 2 and Graph 1). Hydrocarbon concentrations have consistently declined in well MW7 (Graph 2 through Graph 4) during active remediation activities. However, the rate of mass recovery continues to decline which indicates that this technology is not appropriate or cost effective for removal of aromatic hydrocarbons (benzene, toluene, ethylbenzene, and total xylenes [BTEX]); gasoline hydrocarbons (total petroleum hydrocarbons as gasoline [TPHg]); and diesel hydrocarbons (total petroleum hydrocarbons as diesel [TPHd]).

In addition, as indicated by increasing dissolved-phase hydrocarbon concentrations detected groundwater samples collected from well MW7 during interruption of active GWE activities (Graph 2 through Graph 4), residual petroleum hydrocarbon sources may still exist in the shallow aquifer near well MW7.

ERI is preparing to conduct a five-day exploratory SVE event to assess the concentrations of vapor-phase petroleum hydrocarbons in the vicinity of well MW7. The test will be conducted utilizing a 5-horse power positive displacement blower mounted on a trailer and capable of producing 15-inches of mercury vacuum and a maximum flow rate of 210 standard cubic feet per minute. The blower will be connected to well MW7 using two-inch flexible tubing. The soil vapors will be extracted from the well using the blower and directed to a vapor-phase activated carbon adsorption system for abatement. Groundwater extracted from the well will be directed to the existing remediation system for treatment with liquid-phase carbon and subsequent discharge.

During the test, readings will be collected periodically of the induced vacuum in the observation wells, applied vacuum, influent and effluent vapor concentrations, and vapor flow rate. The 5-day test will be conducted by using monitoring well MW7 as the vapor extraction well and the perimeter monitoring wells MW1, MW4, MW9, and MW11 will be used as observation wells. In the event that lower-than-expected concentrations are encountered in well MW7, the extraction system will be transferred to well MW9.

Pending favorable results from the SVE event ERI will proceed with the shutdown of the GWE system and assessment of alternative remedial approaches. The results of this SVE test will be included in the work plan to investigate the lateral and vertical extent of residual hydrocarbons and related compounds in groundwater as requested in the California Regional Water Quality Control Board, North Coast Region (Regional Board) letter dated January 5, 2005.

Please call Mr. Glenn Matteucci, ERI's project manager for this site, at (707) 766-2030, or myself at (415) 798-0175 with any questions regarding this letter.

Sincerely,  
Environmental Resolutions, Inc.

Travis Finn  
Sr. Staff Scientist

John B. Bobbitt  
R.G. 4313

- Attachments: Table 1: Cumulative Groundwater Monitoring and Sampling Data
- Table 2: Groundwater Pump and Treat System Summary
- Plate 1: Generalized Site Plan (Plate 1)
- Graph 1: Total Liquid Phase Hydrocarbons Removed Vs. Gallons Removed
- Graph 2: Groundwater Concentrations of MTBE Vs. Time – MW7
- Graph 3: Groundwater Concentrations of TPHg Vs. Time – MW7
- Graph 4: Groundwater Concentrations of BTEX Vs. Time – MW7

cc: Mr. John Mahoney, Redwood Oil Company

Table 1  
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA  
 Redwood Oil Company Service Station #114  
 1855 Guerneville, Santa Rosa, CA  
 ERI 2610  
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Well ID # (TOC)	Sample Date	DTW	Elev.	TPHg	TPHd	B	T	E	X	MTBE
		←feet→								
(108.21)	MW-1	09/01/89	15.20	93.01	—	—	—	—	—	—
	(123.18)	06/01/90	9.61	98.60	—	—	—	—	—	—
		02/01/91	13.48	109.70	2,200	210	370	99	88	180
		03/01/91	12.10	111.08	—	—	—	—	—	—
		04/01/91	6.07	117.11	—	—	—	—	—	—
		05/16/91	10.24	112.94	2,900	80	370	38	80	120
		06/07/91	12.36	110.82	—	—	—	—	—	—
		07/01/91	12.76	110.42	—	—	—	—	—	—
		08/01/91	15.17	108.01	—	—	—	—	—	—
		08/16/91	18.01	107.17	1,800	60	590	16	77	69
		09/09/91	18.34	108.84	—	—	—	—	—	—
		10/04/91	16.47	106.71	—	—	—	—	—	—
(123.82)		11/06/91	15.20	107.98	—	—	—	—	—	—
		12/06/91	14.00	109.18	1000	530	460	23	51	66
		01/06/92	12.24	110.94	—	—	—	—	—	—
		02/19/92	7.80	115.38	—	—	—	—	—	—
		03/30/92	6.74	117.08	2800	470	600	<0.5	100	130
		04/23/92	7.76	118.06	—	—	—	—	—	—
		05/18/92	9.69	114.13	—	—	—	—	—	—
		06/16/92	11.91	111.91	6000	<50	1100	110	150	300
		07/24/92	14.80	108.92	—	—	—	—	—	—
		08/18/92	14.94	108.88	—	—	—	—	—	—
		09/24/92	15.59	108.23	16000	1600	2400	52	310	320
		10/21/92	15.59	108.23	—	—	—	—	—	—
(123.25)		11/16/92	15.41	108.41	—	—	—	—	—	—
		12/16/92	9.78	114.04	70	100	4.5	<0.5	0.7	1.2
		01/13/93	8.34	117.48	—	—	—	—	—	—
		02/23/93	7.48	118.34	—	—	—	—	—	—
		03/17/93	8.68	115.14	<50	710	<0.5	<0.5	<0.5	<0.5
		04/16/93	7.78	116.04	—	—	—	—	—	—
		05/14/93	8.48	115.34	—	—	—	—	—	—
		09/30/93	15.45	108.37	2300	330	930	21	38	50
		03/22/94	7.52	115.73	5,900	540	610	24	55	44
		09/22/94	13.70	109.55	5,800	70	1,500	86	210	340
		03/24/95	3.76	119.49	1,500	370	260	30	58	85
		08/30/95	11.81	111.44	12,000	390	2,800	210	410	580
(124.84)		03/19/96	5.52	117.73	730	<50	230	18	54	48
		09/16/96	17.30	105.95	470	<50	74	20	18	32
		03/24/97	14.27	108.98	170	70	21	8.7	6.7	11
		09/29/97	18.00	105.25	550	60	74	21	28	44
		04/30/98	7.55	115.70	250	<50	25	3.0	11	13
		07/30/98	11.83	111.42	4,000	<50	510	170	180	240
		10/27/98	23.97	99.28	490	<50	8	3	3	4
		01/27/99	16.08	107.17	340	<50	23	17	13	31
		04/21/99	6.40	118.85	2,700	<50	260	140	140	240
		07/29/99	—	—	—	—	—	—	—	—
		10/28/99	21.79	101.46	<50	<50	0.80	<0.5	<0.5	<0.5
		02/04/00	11.60	111.65	<50	<50	<0.5	<0.5	<0.5	<0.5
	04/27/00	20.45	102.80	92	<50	2.0	1.3	1.1	2.0	
	07/25/00	15.15	108.10	4900	240	320	33	130	90	
	10/26/00	21.49	101.76	<50	<50	1.3	<0.5	<0.5	<0.5	
	01/17/01	21.72	101.53	<50	<50	<0.5	<0.5	<0.5	<0.5	
	04/24/01	14.38	108.87	<50	<50	<0.5	<0.5	<0.5	<0.5	
	07/31/01	16.55	106.70	2300	280	220	29	110	53	
	12/05/01	23.00	101.84	260	<50	14	22	9.6	41	
	01/31/02	23.00	101.84	<50	<50	1.1	<0.5	<0.5	2.8	
	04/17/02	21.85	102.99	<50	<50	<1	<1	<1	<1	
	07/10/02	22.05	102.79	<50	<50	<1	<1	<1	<1	
	10/10/02	22.00	102.84	<50	<63	<0.5	<0.5	<0.5	<1	
	01/13/03	6.20	118.64	590	100	47	6.9	<2.5	18	
	03/14/03	18.35	106.49	—	—	—	—	—	—	
	04/16/03	18.40	106.44	58	<50	3	2	2	2	
	07/18/03	18.35	108.49	<50	<50	1	<1	<1	<1	
	10/21/03	18.35	106.49	<50	<50	<1	<1	<1	<1	
	04/08/04	18.35	108.49	140	<50	2.8	2.5	2.2	12	

Table 1  
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA  
 Redwood Oil Company Service Station #114  
 1855 Guerneville, Santa Rosa, CA  
 ERI 2610  
 (Page 2 of 10)

Well ID # (TOC)	Sample Date	DTW	Elev.	TPHg	TPHd	B	T	E	X	MTBE
		← feet →					ug/L			
MW-2 (107.00)	09/01/89	7.15	99.85	—	—	—	—	—	—	—
	10/06/89	—	—	378,000	110,000	18,900	29,100	2,700	22,200	—
(122.68)	06/01/90	6.48	100.52	—	—	—	—	—	—	—
	02/01/91	6.93	115.75	—	—	—	—	—	—	—
	03/01/91	7.38	115.30	—	—	—	—	—	—	—
	04/01/91	6.35	116.33	—	—	—	—	—	—	—
	05/16/91	6.79	115.89	—	—	—	—	—	—	—
	06/07/91	7.22	115.46	—	—	—	—	—	—	—
	07/01/91	7.63	115.05	—	—	—	—	—	—	—
	08/01/91	7.58	115.10	—	—	—	—	—	—	—
	08/16/91	8.34	114.34	—	—	—	—	—	—	—
	09/09/91	8.19	114.49	—	—	—	—	—	—	—
	10/04/91	8.89	113.79	—	—	—	—	—	—	—
	11/06/91	7.94	114.74	—	—	—	—	—	—	—
	12/06/91	7.41	115.27	—	—	—	—	—	—	—
(123.14)	01/08/92	7.75	114.93	—	—	—	—	—	—	—
	02/19/92	6.05	116.83	—	—	—	—	—	—	—
	03/30/92	6.55	116.59	—	—	—	—	—	—	—
	04/23/92	6.24	116.90	—	—	—	—	—	—	—
	05/18/92	7.09	116.05	—	—	—	—	—	—	—
	06/16/92	7.65	115.49	—	—	—	—	—	—	—
	07/24/92	9.51	113.63	—	—	—	—	—	—	—
	08/18/92	9.50	113.64	—	—	—	—	—	—	—
	09/24/92	8.97	114.17	—	—	—	—	—	—	—
	10/21/92	8.73	114.41	—	—	—	—	—	—	—
	11/16/92	8.64	114.50	—	—	—	—	—	—	—
	12/16/92	7.07	116.07	—	—	—	—	—	—	—
	01/13/93	5.78	117.36	—	—	—	—	—	—	—
	02/23/93	10.19	112.95	—	—	—	—	—	—	—
	03/17/93	8.41	114.73	—	—	—	—	—	—	—
	04/16/93	6.75	116.39	—	—	—	—	—	—	—
	05/14/93	6.47	114.67	—	—	—	—	—	—	—
	09/30/93	13.61	109.53	—	—	—	—	—	—	—
(123.20)	03/22/94	6.34	116.80	25,000	25,000	370	670	640	3,400	—
	09/22/94	8.40	114.80	51,000	30,000	730	1,700	1,700	8,300	—
	03/27/95	5.92	117.28	—	—	—	—	—	—	—
	08/30/95	7.96	115.24	—	—	—	—	—	—	—
	03/19/96	6.14	117.06	19,000	13,000	120	79	540	1,600	—
	09/16/96	7.15	116.05	—	—	—	—	—	—	—
	03/24/97	5.00	118.20	53,000	32,000	650	1,000	3,000	13,000	—
	09/29/97	7.16	116.04	—	—	—	—	—	—	—
	04/30/98	4.83	118.37	64,000	1,600	390	<0.5	1,600	5,700	—
	07/30/98	5.87	117.33	340,000	77,000	640	290	3,000	8,200	<5.0
	10/27/98	7.32	115.88	110,000	1,200,009	240	50	1,400	3,000	6
	01/27/99	4.67	118.53	31,000	29,000	240	82	1,500	3,200	<500
	04/21/99	6.28	116.92	19,000	120,008	48	85	290	1,100	40
	07/29/99	7.92	115.28	16,000	14,000	110	50	500	450	260
	10/28/99	20.30	102.90	190,000	120,008	960	770	5,100	1,300	<50
	02/04/00	7.89	115.31	9,300	8,100	13	42	130	440	60
	04/27/00	13.25	109.95	19,000	5,700	1,400	900	710	2,000	240
	07/25/00	8.77	114.43	11,000	1,700	62	20	55	120	3.21
	10/28/00	15.42	107.78	10,000	2,000	380	200	310	650	57
	01/17/01	8.75	114.45	4,100	4,900	190	39	170	310	19
	04/24/01	16.24	106.96	3,400	5,000	130	42	170	270	84
(122.57)	07/31/01	11.11	112.09	3,800	4,600	290	22	110	70	<50
	12/05/01	23.00	99.57	6,200	1,700	120	110	90	490	6.5
	01/31/02	23.00	99.57	370	1,100	4.2	2.1	3	18.8	<5
	04/17/02	18.10	104.47	910	1,100	35	16	9	62	74
	07/10/02	18.25	104.32	920	2,100	22	4	1	26	45
	10/10/02	18.16	104.41	120,024	2,100	1.1	4.7	<0.5	2.2	52
	01/13/03	5.18	117.39	1,600	4,200	16	<5	18	12	<2
	03/14/03	17.85	104.72	—	—	—	—	—	—	—
	04/16/03	14.50	108.07	<50	520	4	<1	<1	1	14
	07/16/03	18.50	104.07	1,100	2,300	88	4	26	13	67
	10/21/03	14.69	107.88	2,700	5,800	190	9	140	29	100
(122.57)	04/06/04	14.69	107.88	420	<210	2.7	1.2	0.9	6	8.7

Table 1  
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA  
 Redwood Oil Company Service Station #114  
 1855 Guerneville, Santa Rosa, CA  
 ERI 2819  
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Well ID # (TOC)	Sample Date	DTW	Elev.	TPHg	TPHd	B	T	E	X	MTBE
		← feet →	→	← ug/L →						
MW-3	09/01/89	14.14	92.74	—	—	—	—	—	—	—
(108.88)	10/06/89	—	—	85,700	—	720	2,640	720	7,860	—
	06/01/90	8.44	98.44	—	—	—	—	—	—	—
	11/15/90	—	—	16,000	1,300	1,000	420	<50	2,000	—
(122.73)	02/01/91	11.35	111.38	22,000	1,500	2,400	1,300	940	3,100	—
	03/01/91	9.83	112.90	—	—	—	—	—	—	—
	04/01/91	5.84	118.89	—	—	—	—	—	—	—
	05/16/91	9.48	113.25	21,000	1,400	1,800	1,000	710	2,300	—
	06/07/91	10.95	111.78	—	—	—	—	—	—	—
	07/01/91	7.20	115.53	—	—	—	—	—	—	—
	08/01/91	12.85	109.88	—	—	—	—	—	—	—
	08/16/91	14.15	108.58	16,000	960	1,400	730	120	1,200	—
	09/09/91	14.42	108.31	—	—	—	—	—	—	—
	10/04/91	14.57	108.16	—	—	—	—	—	—	—
	11/06/91	13.28	109.45	—	—	—	—	—	—	—
	12/06/91	12.34	110.39	19,000	3,600	2,300	1,000	690	1,900	—
	01/06/92	10.42	112.31	—	—	—	—	—	—	—
	02/19/92	5.79	116.94	—	—	—	—	—	—	—
	03/30/92	6.07	116.66	12,000	3,900	580	590	320	2,000	—
	04/23/92	7.48	115.27	—	—	—	—	—	—	—
	05/18/92	9.13	113.60	—	—	—	—	—	—	—
	06/16/92	10.51	112.22	17,000	21,000	2,100	1,300	620	2,000	—
	07/24/92	12.92	109.81	—	—	—	—	—	—	—
	08/18/92	13.04	109.69	—	—	—	—	—	—	—
	09/24/92	13.96	108.77	72,000	5,800	1,500	350	800	1,600	—
	10/21/92	13.40	109.33	—	—	—	—	—	—	—
	11/16/92	13.88	108.85	—	—	—	—	—	—	—
	12/16/92	8.40	114.33	250	140	<0.5	<0.5	<0.5	2	—
	01/13/93	5.73	117.00	—	—	—	—	—	—	—
	02/23/93	9.39	113.34	—	—	—	—	—	—	—
	03/17/93	8.82	113.91	2,300	790	380	130	48	130	—
	04/16/93	7.64	115.09	—	—	—	—	—	—	—
	05/14/93	7.57	115.16	—	—	—	—	—	—	—
	09/30/93	14.10	108.63	14,000	2,300	1,900	450	500	1,000	—
(122.72)	03/22/94	5.80	116.92	200	1,100	7.4	7.9	5	20	—
	09/22/94	—	—	—	—	—	—	—	—	—
	03/27/95	—	—	—	—	—	—	—	—	—
	08/30/95	—	—	—	—	—	—	—	—	—
	03/19/96	8.91	113.81	920	<50	41	24	25	86	—
	09/16/96	17.26	105.46	9,500	<100	710	500	380	1,200	—
	03/24/97	13.85	108.87	1,300	410	17	4.1	6.4	42	—
	09/29/97	13.83	109.09	1,900	<50	140	44	69	160	—
	04/30/98	5.22	117.50	<50	<50	<0.5	<0.5	<0.5	0.82	—
	07/30/98	9.29	113.43	16,000	2,100	320	450	540	1,600	32
	10/27/98	19.27	103.45	1,000	500	6	<0.5	2	3	7
	01/27/99	8.72	114.00	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	04/21/99	10.97	111.75	72	<50	2.1	1.4	2.6	10	16
	07/29/99	12.03	110.69	920	2608	50	30	38	110	19
	10/28/99	11.04	111.68	2,200	4908	85	36	80	210	<5.0
	02/04/00	5.12	117.60	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	04/27/00	4.90	117.82	220	<50	0.98	0.72	1.6	2.4	8.1
	07/25/00	9.62	113.10	160	110	16	2.7	4.2	2.9	6.7
	10/26/00	10.61	112.11	2,100	<50	86	6.3	31	9.8	12
	01/17/01	9.64	113.08	440	340	48	3.6	14	6.1	7.1
	04/24/01	5.48	117.26	93	81	0.68	<0.5	<0.5	<0.5	<5.0
	07/31/01	10.31	112.41	460	150	12	1.9	5.9	4.5	15
(123.28)	12/05/01	23.00	100.26	80	120	0.89	0.52	<0.5	4.4	<5
	01/31/02	23.00	100.26	230	<50	7.3	2.6	10	22.6	<5
	04/17/02	21.10	102.16	1,500	280	31	11	11	132	11
	07/10/02	11.45	111.81	1,400	160	53	100	49	245	32
	10/10/02	—	—	—	—	—	—	—	—	—
	01/13/03	3.05	120.21	—	—	—	—	—	—	—
	03/14/03	11.80	111.48	<50	57	<0.5	<0.5	<0.5	<1	<1
	04/18/03	11.30	111.96	63	<50	2	<1	1	4	2
	07/16/03	11.15	112.11	120	190	5	<1	4	5	10
	10/21/03	12.00	111.26	370	760	47	3	28	21	6
	04/06/04	12.00	111.26	120	<50	1.3	0.7	2.4	6	<0.5



Table 1  
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA  
 Redwood Oil Company Service Station #114  
 1855 Guerneville, Santa Rosa, CA  
 ERI 2818  
 (Page 5 of 10)

Well ID # (TOC)	Sample Date	DTW	Elev.	TPHg	TPHd	B	T	E	X	MTBE
		← feet →		← ug/L →						
MW-6	03/30/92	7.38	115.48	89,000	14,000	11,000	19,000	1,400	18,000	—
(122.86)	04/23/92	7.63	115.23	—	—	—	—	—	—	—
	05/16/92	8.62	114.24	—	—	—	—	—	—	—
	06/16/92	9.97	112.89	73,000	<50	5,900	1,400	2,400	6,700	—
	07/24/92	11.72	111.14	—	—	—	—	—	—	—
	08/18/92	11.83	110.83	—	—	—	—	—	—	—
	09/24/92	—	—	—	—	—	—	—	—	—
	10/21/92	—	—	—	—	—	—	—	—	—
	11/18/92	—	—	—	—	—	—	—	—	—
	12/16/92	10.9	111.98	81,000	17,000	6,700	8,700	770	9,100	—
	01/13/93	6.67	116.19	—	—	—	—	—	—	—
	02/23/93	10.65	112.21	—	—	—	—	—	—	—
	03/17/93	8.88	114.18	2,800	1,800	380	140	17	580	—
	04/18/93	7.45	115.41	—	—	—	—	—	—	—
	05/14/93	7.48	115.38	—	—	—	—	—	—	—
	09/30/93	—	—	—	—	—	—	—	—	—
	03/22/94	7.03	115.83	5,000	22,000	620	92	290	660	—
	09/22/94	12.24	110.62	—	—	—	—	—	—	—
	03/27/95	8.61	114.25	18,000	6,300	3,900	2,000	1,000	3,200	—
	08/30/95	10.3	112.58	28,000	—	3,200	290	1,500	2,500	—
	03/19/96	8.21	114.85	20,000	<100	3,600	780	1,300	2,500	—
	09/18/96	—	—	—	—	—	—	—	—	—
	03/24/97	—	—	—	—	—	—	—	—	—
	09/29/97	—	—	—	—	—	—	—	—	—
	04/30/98	—	—	—	—	—	—	—	—	—
	07/30/98	—	—	—	—	—	—	—	—	—
	10/27/98	—	—	—	—	—	—	—	—	—
	01/27/99	—	—	—	—	—	—	—	—	—
	04/21/99	8.38	114.48	3,600	1908	300	41	150	150	<5.0
	07/29/99	—	—	—	—	—	—	—	—	—
	04/27/00	7.51	115.35	1,400	<50	71	15	21	13	18

Table 1  
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA  
 Redwood Oil Company Service Station #114  
 1855 Guerneville, Santa Rosa, CA  
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Well ID # (TOC)	Sample Date	DTW Elev.		TPHg	TPHd	B	T				X	MTBE
		←feet→					←ug/L→					
(123.53)	03/30/92	5.53	118.00	88,000	5,040	20,000	22,000	3,200	14,000	—	—	—
	04/23/92	6.57	116.96	—	—	—	—	—	—	—	—	—
	05/16/92	7.66	115.87	—	—	—	—	—	—	—	—	—
	06/16/92	—	—	—	—	—	—	—	—	—	—	—
	06/22/92	—	—	310,000	<50	24,000	30,000	7,000	30,000	—	—	—
	07/24/92	12.03	111.60	—	—	—	—	—	—	—	—	—
	08/18/92	12.14	111.39	—	—	—	—	—	—	—	—	—
	09/24/92	12.83	110.70	110,000	32,000	23,000	27,000	3,300	16,000	—	—	—
	10/21/92	12.63	110.90	—	—	—	—	—	—	—	—	—
	11/16/92	12.71	110.82	—	—	—	—	—	—	—	—	—
	12/16/92	7.75	115.78	67,000	11,000	12,000	15,000	1,100	7,800	—	—	—
	01/13/93	5.40	118.13	—	—	—	—	—	—	—	—	—
	02/23/93	10.81	112.72	—	—	—	—	—	—	—	—	—
	03/17/93	7.87	115.86	48,000	12,000	10,000	14,000	1,400	7,800	—	—	—
	04/16/93	8.35	117.18	—	—	—	—	—	—	—	—	—
05/14/93	8.38	115.15	—	—	—	—	—	—	—	—	—	
09/30/93	13.45	110.08	74,000	14,000	7,600	11,000	1,400	7,700	—	—	—	
03/22/94	8.20	117.30	63,000	27,000	7,600	12,000	1,100	8,300	—	—	—	
09/22/94	13.70	109.80	78,000	1,100	11,000	13,000	1,500	8,600	—	—	—	
03/27/95	3.87	119.63	—	—	—	—	—	—	—	—	—	
08/30/95	9.14	114.36	100,000	5,400	16,000	4,800	2,600	13,000	—	—	—	
03/19/96	6.19	117.31	84,000	<250	9,000	9,800	1,600	8,300	—	—	—	
09/16/96	13.83	109.67	50,000	<500	5,500	6,800	1,800	7,100	—	—	—	
03/24/97	13.50	110.00	68,000	4,600	5,800	9,600	2,700	11,000	—	—	—	
09/29/97	13.42	110.08	21,000	3,600	1,700	1,900	910	3,800	—	—	—	
04/30/98	7.60	115.90	18,000	290	1,300	1,300	630	2,300	—	—	—	
07/30/98	13.07	110.43	18,000	660	310	560	530	2,000	—	—	20	
10/27/98	13.98	109.52	11,000	4	780	460	310	1,500	—	—	54	
01/27/99	13.58	109.92	32,000	<50	1,500	1,900	1,100	3,700	—	—	360	
04/21/99	5.65	117.85	15,000	510	800	510	410	1,400	—	—	130	
07/29/99	10.85	112.65	7,000	1,900	330	120	330	810	—	—	150	
10/28/99	13.68	109.82	11,000	1,300	300	32	630	1,500	—	—	<5.0	
02/04/00	13.58	109.94	26,000	<50	980	1,300	710	2,800	—	—	980	
04/27/00	9.58	113.94	3,000	490	110	32	170	290	—	—	1,100	
07/25/00	—	—	—	—	—	—	—	—	—	—	—	
10/26/00	10.60	112.90	1,100	<50	34	19	21	74	—	—	<0.5	
01/17/01	10.14	113.36	600	1,100	5.1	2.2	12	17	—	—	<5.0	
04/24/01	13.26	110.24	10,000	5,300	580	990	810	2,100	—	—	<250	
07/31/01	11.77	111.73	750	390	16	8.6	24	38	—	—	16	
12/05/01	27.00	97.46	610	150	81	46	18	82	—	—	33	
01/31/02	27.00	97.46	1,400	260	72	43	5.5	191	—	—	22	
04/17/02	25.80	98.66	1,500	460	37	67	12	320	—	—	29	
07/10/02	25.85	98.61	1,700	340	55	130	60	292	—	—	36	
10/10/02	25.80	98.66	670	380	4.8	6.4	1.1	20	—	—	21	
01/13/03	7.91	116.55	9,800	1,900	360	230	470	1,500	—	—	14	
03/14/03	25.80	98.66	—	—	—	—	—	—	—	—	—	
04/16/03	25.80	98.66	<50	<50	<1	<1	<1	<1	—	—	14	
07/16/03	25.80	98.66	<50	110	1	<1	<1	<1	—	—	15	
10/21/03	25.80	98.66	<50	<50	<1	<1	<1	<1	—	—	2	
04/08/04	25.80	98.66	3,700	1,700	150	82	200	437	—	—	7.2	

Table 1  
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA  
 Redwood Oil Company Service Station #114  
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Well ID # (TOC)	Sample Date	DTW	Elev.	TPHg	TPHd	B	T	E	X	MTBE
		←feet→								
MW-8 (124.10)	03/30/92	6.00	118.10	22,000	9,090	860	3,200	580	4,000	—
	04/23/92	6.89	117.21	—	—	—	—	—	—	—
	05/18/92	9.00	115.10	—	—	—	—	—	—	—
	06/16/92	11.71	112.39	83,000	<50	10,000	16,000	1,800	8,500	—
	07/24/92	14.51	109.59	—	—	—	—	—	—	—
	08/18/92	14.65	109.45	—	—	—	—	—	—	—
	09/24/92	15.58	108.52	—	—	—	—	—	—	—
	10/21/92	15.43	108.67	—	—	—	—	—	—	—
	11/16/92	5.46	118.64	—	—	—	—	—	—	—
	12/18/92	7.73	118.37	—	—	—	—	—	—	—
	01/13/93	5.30	118.80	—	—	—	—	—	—	—
	02/23/93	10.31	113.79	—	—	—	—	—	—	—
	03/17/93	7.67	116.43	—	—	—	—	—	—	—
(123.95)	04/16/93	6.56	117.54	—	—	—	—	—	—	—
	05/14/93	8.13	115.97	—	—	—	—	—	—	—
	09/30/93	15.10	109.00	110,000	35,000	12,000	34,000	4,000	22,000	—
	03/22/94	5.10	118.85	89,000	460,000	1,400	12,000	2,800	15,000	—
	09/22/94	13.86	110.09	66,000	4,600	2,300	8,400	1,900	10,000	—
	03/27/95	3.25	120.70	—	—	—	—	—	—	—
	08/30/95	11.05	112.90	—	—	—	—	—	—	—
	03/19/96	4.08	119.87	5,800	<50	5.3	130	91	480	—
	09/16/96	14.49	109.48	18,000	<500	110	810	320	2,800	—
	03/24/97	5.58	118.37	20,000	8,800	40	45	67	170	—
	09/29/97	13.29	110.66	1,200	640	19	1.1	2.2	5.8	—
	04/30/98	5.55	118.40	260	<50	0.87	<0.5	1.1	1.9	—
	07/30/98	10.42	113.53	6,100	250	33	150	100	410	<5.0
10/27/98	15.41	108.54	6,900	59	9	20	42	240	2	
01/27/99	5.42	118.53	800	<50	<0.5	1.4	1.3	8.9	<5.0	
04/21/99	7.70	116.25	2,100	100	4.3	0.76	4.1	37	7.7	
07/29/99	11.01	112.94	9,800	1,300	24	60	130	630	88	
10/28/99	16.98	106.97	24,000	—	<50	310	330	1,500	<50	
02/04/00	10.78	113.17	2,200,000	180,000	<500	7,200	9,600	82,000	<500	
03/09/00	—	—	9,600	3,300	27	200	140	690	90	
03/09/00	—	—	12,000	3,100	<50	260	150	800	260	
04/27/00	14.82	109.13	47,000	12,000	130	760	590	2,100	240	
07/25/00	12.50	111.45	16,000	2,200	55	29	68	210	<10	
10/26/00	—	—	110,000	530,000	<550	<550	900	3,400	<550	
01/17/01	15.57	108.38	1,400	83,000	52	55	24	150	<50	
04/24/01	8.10	115.85	43,000	55,000	<50	300	450	3,100	<500	
07/31/01	14.31	109.64	11,000	7,000	93	100	69	210	<250	
(124.07)	12/05/01	27.00	97.07	380	81	3	5.1	2.1	28	<5
	01/31/02	27.00	97.07	<50	<50	<0.5	<0.5	<0.5	<0.5	<5
	04/17/02	20.05	104.02	3,100	1,000	30	5	1	207	<1
	07/10/02	25.82	98.25	3,200	1,100	340	52	13	450	2
	10/10/02	25.80	98.27	11,000	2,000	550	220	130	370	<25
	01/13/03	3.80	120.47	150	880	<0.5	<0.5	<0.5	4.6	<1
	03/14/03	25.80	98.27	—	—	—	—	—	—	—
	04/16/03	7.61	116.46	1,300	7,400	41	22	6	86	<1
	07/16/03	25.80	98.27	750	32,000	26	24	8	91	3
	10/21/03	25.80	98.27	4,600	1,600	8	59	8	470	<1
04/08/04	25.80	98.27	61	<50	<0.5	<0.5	<0.5	1.4	<0.5	

Table 1  
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA  
 Redwood Oil Company Service Station #114  
 1855 Guerneville, Santa Rosa, CA  
 ERI 2619  
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Well ID # (TOC)	Sample Date	DTW Elev.		TPHg	TPHd	B T E X					MTBE
		←feet→				←ug/L→					
MW-9 (122.57)	03/22/94	5.74	116.83	47,000	150,000	810	2,800	900	11,000	—	
	09/22/94	8.40	114.17	52,000	4,100	900	1,300	1,600	7,700	—	
	03/27/95	5.15	117.42	—	—	—	—	—	—	—	
	08/30/95	7.20	115.37	19,000	5,500	380	220	520	2,100	—	
	03/19/98	5.43	117.14	9,000	5,000	150	140	170	670	—	
	09/16/96	12.98	109.59	6,500	2,000	560	720	220	1,100	—	
	03/24/97	6.42	116.15	250	290	7.6	1.3	2.5	12	—	
	09/29/97	12.53	110.04	2,700	1,200	170	60	1.5	520	—	
	04/30/98	5.17	117.40	350	<50	11	<0.5	7.7	22	—	
	07/30/98	7.01	115.56	<500	380	21	<5	<5	8.8	<5.0	
	10/27/98	8.80	113.77	330	<50	<0.5	<0.5	<0.5	<1	2	
	01/27/99	6.06	116.51	100	<50	8.9	<0.5	1.1	<0.5	7.7	
	04/21/99	5.97	116.80	<50	<50	3.2	<0.5	<0.5	1.1	6.6	
	07/29/99	6.24	116.33	120	538	0.9	0.8	0.8	1.6	<5.0	
	10/28/99	11.50	111.07	78	<50	<0.5	1	<0.5	1.7	<0.5	
	02/04/00	6.10	116.47	200	<50	8.5	2.8	<0.5	3.2	<0.5	
	04/27/00	5.12	117.45	110	<50	3.6	1.2	<0.5	<0.5	11	
	07/25/00	6.67	115.90	900	180	15	1.9	13	19	3.1	
	10/26/00	6.56	116.01	510	<50	8.2	0.8	1.5	0.8	<0.5	
	01/17/01	9.11	113.46	290	2,100	5.4	3.8	1.6	8.8	<5.0	
04/24/01	6.31	116.28	160	200	9.6	0.78	2.2	1.6	<5.0		
(123.60)	07/31/01	10.95	111.62	180	100	1.9	0.9	<0.5	3.3	5	
	12/05/01	5.21	118.39	570	570	72	6.5	9.2	17	<5	
	01/31/02	8.50	115.10	820	520	<5	<5	<5	<5	<5	
	04/17/02	12.51	111.09	290	54	46	67	6	25	1	
	07/10/02	13.55	110.05	220	350	6	5	2	8	<1	
	10/10/02	14.11	109.49	3,100	1,200	<25	<25	98	280	<10	
	01/13/03	4.32	119.28	580	470	27	5.3	3.2	9.2	<2	
	03/14/03	8.05	115.55	—	—	—	—	—	—	—	
	04/16/03	7.21	116.39	87	93	7	<1	<1	1	<1	
	07/18/03	9.07	114.53	430	450	<1	<1	<1	4	7	
10/21/03	12.88	110.72	140	76	<1	<1	<1	1	2		
04/06/04	6.82	116.78	99	51	5.4	4.9	1.2	15.6	1.1		
MW-10 (122.52)	11/11/99	15.03	107.49	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	02/04/00	11.30	111.22	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
	04/27/00	11.98	110.54	<50	<50	<0.5	<0.5	<0.5	<0.5	7.4	
	07/25/00	14.60	107.92	<50	120	<0.5	<0.5	<0.5	<0.5	<2.0	
	10/26/00	15.83	106.69	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
	01/17/01	13.00	109.52	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	04/24/01	—	—	—	—	—	—	—	—	—	
	08/08/01	16.21	106.31	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	(123.85)	12/05/01	9.40	114.45	<50	150	<0.5	<0.5	<0.5	<0.5	<5
		01/31/02	8.12	115.73	<50	<50	<0.5	<0.5	<0.5	0.76	<5
		04/17/02	10.90	112.95	370	<50	93	95	6	18	<1
		07/10/02	15.70	108.15	<50	<50	<1	<1	<1	<1	<1
		10/10/02	16.85	107.00	<50	<50	2.7	2.4	1.2	3.7	<5
		01/13/03	5.75	118.10	<50	140	<0.5	<0.5	<0.5	<1	<1
		03/14/03	7.87	116.18	—	—	—	—	—	—	—
04/16/03		8.49	115.36	<50	<50	<1	<1	<1	<1	<1	
07/18/03	12.80	111.05	<50	<50	<1	<1	<1	<1	<1		
10/21/03	14.79	109.06	<50	<53	<1	<1	<1	<1	<1		
04/06/04	8.30	115.55	<50	<250	<0.5	<0.5	<0.5	<1	<0.5		
MW-11 125.38	12/05/01	5.20	120.18	200	<50	<0.5	<0.5	<0.5	<0.5	<5	
	01/31/02	7.48	117.90	<50	<50	<0.5	<0.5	<0.5	0.71	<5	
	04/17/02	11.16	114.22	370	<50	72	99	8	37	<1	
	07/10/02	15.09	110.29	61	<50	11	7	2	6	2	
	10/10/02	18.47	108.91	<50	<50	4.4	3.5	1.8	5.2	<5	
	01/13/03	5.91	119.47	68	<50	12	5.5	1.2	8.6	<1	
	03/14/03	7.22	118.16	—	—	—	—	—	—	—	
	04/16/03	6.52	118.86	<50	<50	<1	<1	<1	<1	<1	
	07/16/03	11.51	113.87	<50	<50	4	7	<1	7	2	
	10/21/03	14.28	111.12	<50	<50	<1	<1	<1	<1	<1	
04/06/04	6.47	118.91	71	<50	6.5	5.6	1.2	15.9	2.3		

Table 1  
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 Redwood Oil Company Service Station #114  
 1855 Guerneville, Santa Rosa, CA  
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Well ID # (TOC)	Sample Date	DTW Elev.		TPHg	TPHd	B	T	E	X	MTBE
		←feet→								
V-1 124.83	12/05/01	5.30	119.53	—	—	—	—	—	—	—
	01/31/02	5.86	118.97	—	—	—	—	—	—	—
	04/17/02	8.00	116.83	—	—	—	—	—	—	—
	07/10/02	9.10	115.73	—	—	—	—	—	—	—
	10/10/02	9.80	115.03	—	—	—	—	—	—	—
	01/13/03	4.24	120.59	—	—	—	—	—	—	—
	03/14/03	5.87	118.96	—	—	—	—	—	—	—
	04/16/03	7.80	117.03	—	—	—	—	—	—	—
	07/16/03	8.09	118.74	—	—	—	—	—	—	—
	10/21/03	10.09	114.74	—	—	—	—	—	—	—
04/06/04	6.01	118.82	—	—	—	—	—	—	—	
V-2 124.83	12/05/01	5.30	119.33	—	—	—	—	—	—	—
	01/31/02	5.43	119.20	—	—	—	—	—	—	—
	04/17/02	8.20	116.43	—	—	—	—	—	—	—
	07/10/02	9.00	115.63	—	—	—	—	—	—	—
	10/10/02	10.72	113.91	—	—	—	—	—	—	—
	01/13/03	4.25	120.38	—	—	—	—	—	—	—
	03/14/03	5.85	118.78	—	—	—	—	—	—	—
	04/16/03	5.82	118.81	—	—	—	—	—	—	—
	07/16/03	7.98	116.85	—	—	—	—	—	—	—
	10/21/03	9.98	114.85	—	—	—	—	—	—	—
04/06/04	6.02	118.61	—	—	—	—	—	—	—	
V-3 124.31	12/05/01	5.05	119.28	—	—	—	—	—	—	—
	01/31/02	5.35	118.96	—	—	—	—	—	—	—
	04/17/02	7.75	116.56	—	—	—	—	—	—	—
	07/10/02	8.52	115.79	—	—	—	—	—	—	—
	10/10/02	10.55	113.78	—	—	—	—	—	—	—
	01/13/03	3.91	120.40	—	—	—	—	—	—	—
	03/14/03	5.68	118.63	—	—	—	—	—	—	—
	04/16/03	5.52	118.78	—	—	—	—	—	—	—
	07/16/03	7.46	116.85	—	—	—	—	—	—	—
	10/21/03	9.46	114.85	—	—	—	—	—	—	—
04/06/04	5.74	118.57	—	—	—	—	—	—	—	
V-4 124.81	12/05/01	7.05	117.76	—	—	—	—	—	—	—
	01/31/02	7.30	117.51	—	—	—	—	—	—	—
	04/17/02	8.07	116.74	—	—	—	—	—	—	—
	07/10/02	9.31	115.50	—	—	—	—	—	—	—
	10/10/02	8.75	116.08	—	—	—	—	—	—	—
	01/13/03	6.51	118.30	—	—	—	—	—	—	—
	03/14/03	7.30	117.51	—	—	—	—	—	—	—
	04/16/03	7.14	117.67	—	—	—	—	—	—	—
	07/16/03	8.11	116.70	—	—	—	—	—	—	—
	10/21/03	10.11	114.70	—	—	—	—	—	—	—
04/06/04	7.16	117.65	—	—	—	—	—	—	—	
DW-2050	04/21/99	—	—	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	08/11/99	—	—	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	10/28/99	—	—	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	02/04/00	—	—	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	05/01/00	—	—	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.0
	07/25/00	—	—	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.0
	10/26/00	—	—	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	01/17/01	—	—	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	04/24/01	—	—	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	07/31/01	—	—	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	12/05/01	—	—	<50	<50	<0.5	<0.5	<0.5	<0.5	<5
	01/31/02	—	—	<50	<50	<0.5	<0.5	<0.5	<0.5	<5
	04/17/02	—	—	<50	<50	<1	<1	<1	<1	2
	05/24/02	—	—	<50	<50	<0.5	<0.5	<0.5	<1	<6
	07/10/02	—	—	<50	<50	<1	<1	<1	<1	4
	08/07/02	—	—	<50	<50	<0.5	<0.5	<0.5	<1	<5
	10/10/02	—	—	<50	<50	<0.5	<0.5	<0.5	<1	5.7
	01/13/03	—	—	<50	<50	<0.5	<0.5	<0.5	<1	4.4
	04/16/03	—	—	<50	<50	<1	<1	<1	<1	4
	07/16/03	—	—	<50	<50	<1	<1	<1	<1	9
10/21/03	—	—	<50	<50	<1	<1	<1	<1	11	
04/06/04	—	—	<50	<50	<0.5	<0.5	<0.5	<1	6.4	

Table 1  
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA  
 Redwood Oil Company Service Station #114  
 1855 Guerneville, Santa Rosa, CA  
 ERI 2619  
 (Page 10 of 10)

Well ID # (TOC)	Sample Date	DTW Elev.		TPHg TPHd		B T		E X		MTBE
		←—feet—→		←—		—→		—→		
ug/L										
DW-2075	07/24/01	—	—	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	12/05/01	—	—	<50	<50	<0.5	<0.5	<0.5	<0.5	<5
	01/31/02	—	—	<50	<50	<0.5	<0.5	<0.5	<0.5	<5
	04/17/02	—	—	<50	<50	<1	<1	<1	<1	<1
	07/10/02	—	—	<50	<50	<1	<1	<1	<1	<1
	10/10/02	—	—	<50	<50	<0.5	<0.5	<0.5	<1	<5
	01/13/03	—	—	<50	<50	<0.5	<0.5	<0.5	<1	<1
	04/16/03	—	—	<50	<50	<1	<1	<1	<1	<1
	07/16/03	—	—	<50	<50	<1	<1	<1	<1	<1
	10/21/03	—	—	<50	<50	<1	<1	<1	<1	<1
	04/06/04	—	—	<50	<50	<0.5	<0.5	<0.5	<1	<0.5

**Explanation:**

Data collected prior to April, 2004 compiled from the ECM Group Systems Operations Report dated July 9, 2004.

- TOC = Elevation of top of well casing; relative to mean sea level.
- DTW = Depth to water.
- Elev. = Elevation of groundwater above mean sea level.
- TPHg = Total petroleum hydrocarbons as gasoline.
- TPHd = Total petroleum hydrocarbons as diesel.
- BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8021B.
- MTBE = Methyl tertiary butyl ether analyzed using EPA Method 8021B.
- ug/L = Micrograms per liter.
- = Not analyzed/Not measured.
- < = Analytes not detected at or above the laboratory reporting limit.

**TABLE 2**  
**GROUNDWATER PUMP AND TREAT SYSTEM SUMMARY**  
 Redwood Oil Company Service Station #114  
 1855 Guerneville, Santa Rosa, CA  
 ERI 2619

Date	Flow Totalizer Reading (gallons)	CUMULATIVE GALLONS REMOVED	Average Flow over period (gpm)	INFLUENT CONCENTRATIONS						TPHg Removed (lbs)	MTBE Removed (lbs)
				TPHg (ug/l)	TPHd (ug/l)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)		
08/25/00	843,868	843,868									
09/06/00	852,993	852,993	0.53								
10/16/00	889,872	889,872	0.64								
10/26/00	884,456	894,456	0.32								
11/03/00	898,920	898,920	0.39								
11/08/00	898,920	898,920	0.00								
12/06/00	1,159,312	1,159,312	6.46								
12/15/00	1,217,200	1,217,200	4.47								
01/12/01	1,262,700	1,262,700	1.13								
01/17/01	1,338,945	1,338,945	10.59								
02/08/01	1,342,275	1,342,275	0.11								
02/26/01	1,342,275	1,342,275	0.00								
03/12/01	1,342,275	1,342,275	0.00								
03/15/01	1,353,659	1,353,659	2.64	780	--	4.7	29	8.7	74.00	3	
03/23/01	1,355,455	1,355,455	0.18								
04/24/01	1,441,655	1,441,655	1.87								
11/29/01	14,281	1,455,936	0.28								
12/05/01	42,000	1,483,655	3.21								
12/19/01	246,801	1,688,456	10.16								
01/10/02	287,302	1,728,957	1.28								
01/15/02	300,738	1,742,393	1.87								
01/29/02	300,789	1,742,444	0.00								
02/07/02	361,612	1,803,267	4.69								
02/12/02		1,803,267		250	130	9.9	9	5.3	26.00	8	0.47 0.00
02/15/02	393,856	1,835,511	2.80								
02/21/02	424,568	1,866,223	3.55								
02/25/02	443,799	1,885,454	3.34								
03/05/02	468,183	1,909,838	2.12								
03/11/02	505,098	1,946,753	4.27								
03/20/02	551,849	1,993,504	3.61								
03/28/02	579,705	2,021,360	2.42								
04/02/02	605,749	2,047,404	3.62								
04/08/02	632,371	2,074,026	3.08								
04/17/02	668,277	2,109,932	2.77								
04/24/02	692,877	2,134,532	2.44								
05/06/02		2,134,532		1100	3000	2.8	8	<1.25	21.00	29	1.86 0.05
06/19/02	693,029	2,134,684	0.00								
06/28/02	712,038	2,153,693	1.47								
07/02/02	716,941	2,158,586	0.85								
07/10/02	728,258	2,169,913	0.98								
07/16/02	735,194	2,176,849	0.80								
07/19/02	739,515	2,181,170	1.00								
07/23/02	744,634	2,186,289	0.89								

**TABLE 2**  
**GROUNDWATER PUMP AND TREAT SYSTEM SUMMARY**  
 Redwood Oil Company Service Station #114  
 1855 Guerneville, Santa Rosa, CA  
 ERI 2619

Date	Flow Totalizer Reading (gallons)	CUMULATIVE GALLONS REMOVED	Average Flow over period (gpm)	INFLUENT CONCENTRATIONS							TPHg Removed (lbs)	MTBE Removed (lbs)	
				TPHg (ug/l)	TPHd (ug/l)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)	MTBE (ug/l)			
07/29/02	748,651	2,190,306	0.46										
08/07/02	759,332	2,200,987	0.82	700	340	28	9	2.8	44.00	10	0.50	0.01	
08/15/02	767,593	2,209,248	0.72										
08/21/02	774,911	2,216,566	0.85										
08/30/02	785,388	2,227,043	0.81										
09/04/02	791,259	2,232,914	0.82										
09/13/02	801,484	2,243,139	0.79										
09/19/02	808,220	2,249,875	0.78										
09/29/02	815,900	2,257,555	0.53										
10/02/02	822,900	2,264,555	1.62										
10/10/02	831,174	2,272,829	0.72										
10/16/02	831,188	2,272,843	0.00										
10/25/02	831,439	2,273,094	0.02										
10/30/02	837,624	2,279,279	0.86										
11/05/02	843,960	2,285,615	0.73	130	150	1.3	<0.5	<0.5	2.20	9	0.29	0.01	
11/21/02	847,216	2,288,871	0.14										
11/27/02	855,167	2,298,822	0.92										
12/06/02	866,774	2,308,429	0.90										
12/13/02	876,287	2,317,942	0.94										
12/17/02	888,451	2,330,106	2.11										
12/27/02	916,240	2,357,895	1.93										
01/24/03	917,807	2,359,482	0.04										
01/28/03	935,181	2,376,836	3.02										
02/05/03	935,181	2,376,836	0.00										
02/07/03	946,481	2,388,136	3.92										
02/12/03	962,200	2,403,855	2.18										
02/20/03	984,662	2,426,317	1.95	110	190	2.9	1	1.6	4.70	7	0.14	0.01	
02/28/03	1,007,365	2,449,020	1.97										
03/04/03	1,017,703	2,459,358	1.79										
03/11/03	1,035,026	2,476,681	1.72										
03/18/03	1,052,836	2,494,491	1.77										
03/27/03	1,075,172	2,516,827	1.72										
04/04/03	1,075,172	2,516,827	0.00										
04/10/03	1,091,686	2,533,341	1.91										
04/16/03	1,106,350	2,548,005	1.70										
04/24/03	1,127,879	2,569,534	1.87										
05/02/03	1,149,901	2,591,556	1.91										
05/08/03	1,158,417	2,600,072	0.99										
05/14/03	1,168,433	2,610,088	1.16	91	1300	1.9	1	0.7	3.40	7	0.15	0.01	
05/22/03	1,188,933	2,630,588	1.78										
05/29/03	1,188,935	2,630,590	0.00										
06/06/03	1,204,092	2,645,747	1.32										
06/20/03	1,226,647	2,668,302	1.12										
07/03/03	1,243,701	2,685,356	0.91										
07/11/03	1,253,463	2,695,118	0.85										
07/16/03	1,258,696	2,700,351	0.73										
07/25/03	1,268,554	2,710,209	0.76										
07/30/03	1,273,835	2,715,490	0.73										

**TABLE 2**  
**GROUNDWATER PUMP AND TREAT SYSTEM SUMMARY**  
 Redwood Oil Company Service Station #114  
 1855 Guerneville, Santa Rosa, CA  
 ERI 2619

Date	Flow Totalizer Reading (gallons)	CUMULATIVE GALLONS REMOVED	Average Flow over period (gpm)	INFLUENT CONCENTRATIONS							TPHg Removed (lbs)	MTBE Removed (lbs)
				TPHg (ug/l)	TPHd (ug/l)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)	MTBE (ug/l)		
08/08/03	1,283,243	2,724,898	0.73									
08/14/03	1,283,519	2,725,174	0.03	1900	870	86	25	72.0	210.00	3	0.96	0.00
08/19/03	1,289,109	2,730,764	0.78									
08/29/03	1,298,236	2,739,891	0.63									
09/05/03	1,303,919	2,745,574	0.56									
09/12/03	1,310,086	2,751,721	0.61									
09/18/03	1,315,308	2,756,963	0.61									
09/26/03	1,322,013	2,763,668	0.58									
10/03/03	1,325,520	2,767,175	0.35									
10/10/03	1,331,386	2,773,041	0.58									
10/17/03	1,336,982	2,778,637	0.56									
10/21/03	1,340,478	2,782,133	0.61									
10/31/03	1,349,148	2,790,803	0.60									
11/07/03	1,355,847	2,797,502	0.66									
11/19/03	1,368,785	2,810,440	0.75									
12/05/03	1,378,380	2,820,015	0.42	370	810	8.2	2	3.9	8.10	3	0.90	0.00
12/15/03	1,378,398	2,820,053	0.00									
12/22/03	1,392,714	2,834,369	1.42									
01/07/04	1,414,074	2,855,729	0.93									
01/16/04	1,414,247	2,855,902	0.01									
01/20/04	1,425,414	2,867,069	1.94									
02/25/04	1,435,142	2,876,797	0.19									
02/27/04	1,442,161	2,883,816	2.44									
03/03/04	1,459,365	2,901,020	2.39									
03/10/04	1,479,034	2,920,689	1.95									
03/16/04	1,493,537	2,935,192	1.68									
03/26/04	1,516,089	2,957,744	1.57									
03/31/04	1,518,152	2,959,807	0.28									
04/09/04	1,538,939	2,981,594	1.68									
04/16/04	1,550,869	2,992,524	1.08									
04/23/04	1,563,204	3,004,869	1.22	25	—	0.7	<0.5	<0.5	<0.5	2	0.30	0.00
04/28/04	1,571,282	3,012,937	1.12									
05/07/04	1,584,103	3,025,758	0.99									
05/11/04		3,025,758		33	<50	0.74	<0.5	<0.5	<1	2	0.01	0.00
05/17/04	1,596,932	3,038,587	0.89									
05/21/04	1,601,214	3,042,869	0.74									
05/26/04	1,606,404	3,048,059	0.72									
06/01/04	1,616,227	3,057,882	1.14									
06/09/04	1,623,538	3,065,193	0.63									
06/11/04	1,626,596	3,068,251	1.06									
06/14/04	1,630,319	3,071,974	0.86									
06/22/04	1,636,658	3,078,313	0.55									
06/28/04	1,638,939	3,080,594	0.26									
07/02/04	1,642,243	3,083,898	0.57									
07/08/04	1,648,110	3,089,765	0.68									
07/09/04	1,649,086	3,090,741	0.68									
07/16/04	1,655,763	3,097,418	0.66									
07/22/04		3,097,418		360	190	5	4	5.3	33.00	8	0.12	0.00

**TABLE 2**  
**GROUNDWATER PUMP AND TREAT SYSTEM SUMMARY**  
 Redwood Oil Company Service Station #114  
 1855 Guerneville, Santa Rosa, CA  
 ERI 2619

Date	Flow Totalizer Reading (gallons)	CUMULATIVE GALLONS REMOVED	Average Flow over period (gpm)	INFLUENT CONCENTRATIONS						TPHg Removed (lbs)	MTBE Removed (lbs)	
				TPHg (ug/l)	TPHd (ug/l)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)			MTBE (ug/l)
07/23/04	1,661,727	3,103,382	0.59									
07/30/04	1,667,644	3,109,299	0.59									
08/04/04	1,671,901	3,113,556	0.59									
08/17/04	1,682,109	3,123,764	0.55	160000	<50	3100	1000	2400.0	12000.00	2700	17.62	0.30
08/25/04	1,688,062	3,129,717	0.52									
09/01/04	1,692,342	3,133,997	0.42									
09/08/04	1,694,496	3,136,151	0.21	550	<50	16.00	3	5.1	27.00	8	8.29	0.14
09/17/04	1,700,589	3,142,244	0.47									
<b>TOTAL:</b>										<b>31.61</b>	<b>0.64</b>	

**Notes:**

ug/l = micrograms per liter

lbs = pounds

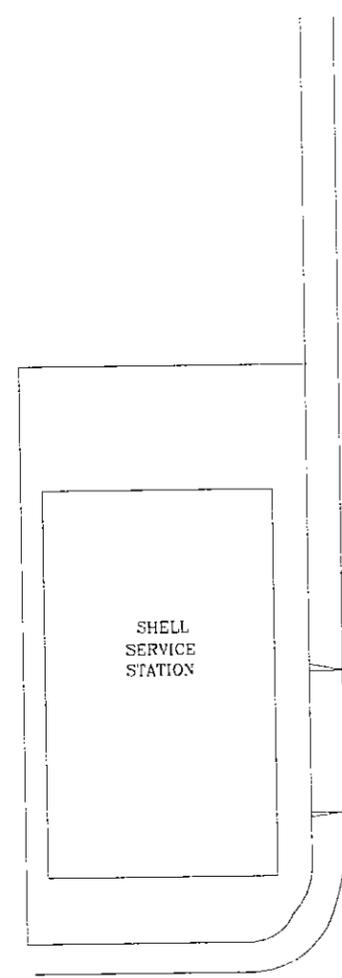
gpm = gallons per minute

MTBE = methyl tertiary butyl ether

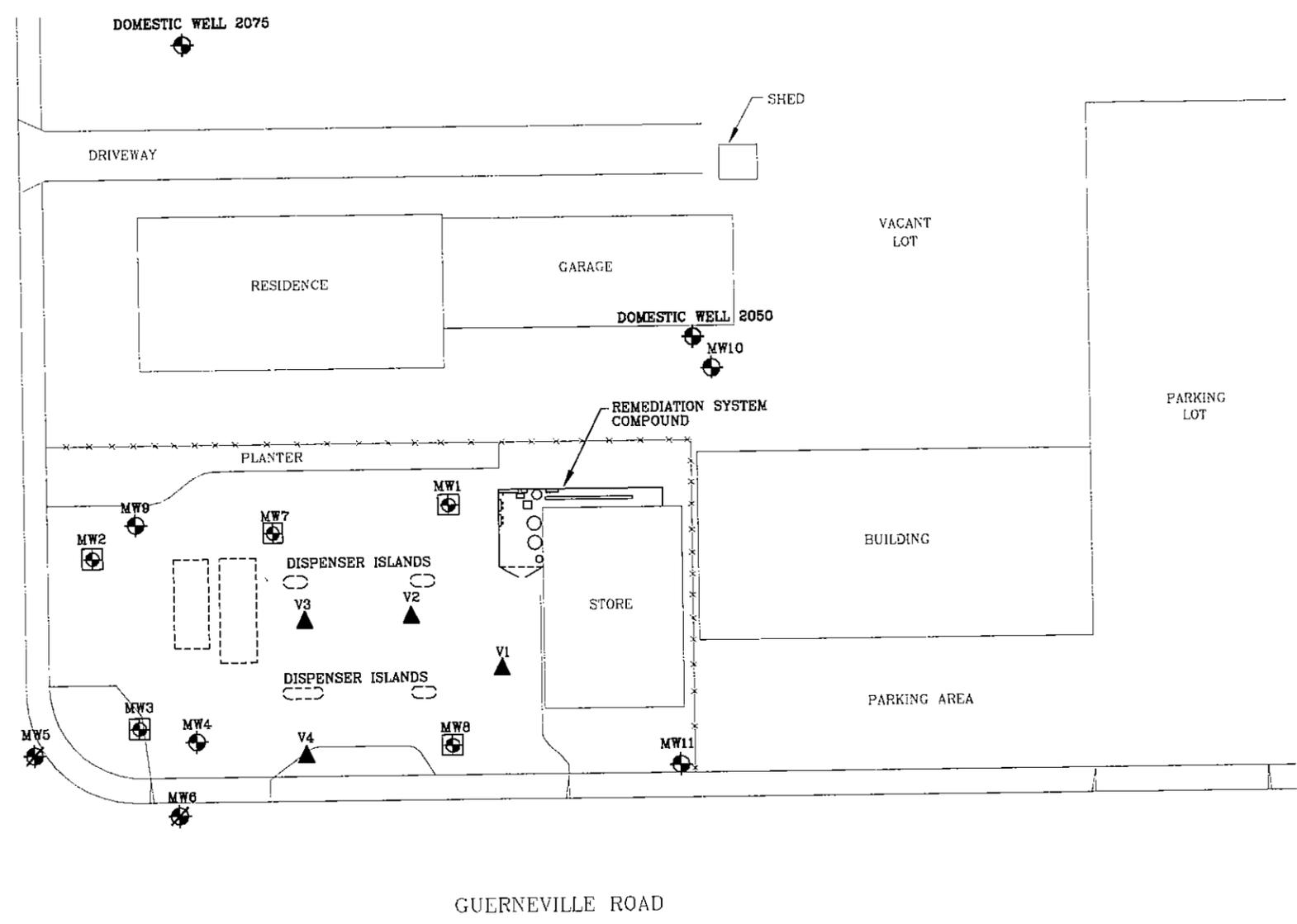
TPHg = total petroleum hydrocarbons as gasoline

<50 = not detected at or above the laboratory reporting limit

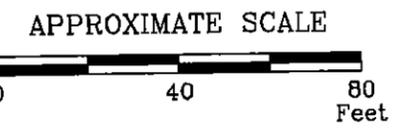
Data collected prior to September, 2004 compiled from the ECM Group Systems Operations Report dated July 9, 2004.



MARLOW ROAD



GUERNEVILLE ROAD



FN 26190001

### GENERALIZED SITE PLAN

REDWOOD OIL SERVICE STATION 114  
1855 Guerneville Road  
Santa Rosa, California

#### EXPLANATION

- MW11 Groundwater Monitoring Well
- MW8 Groundwater Recovery Well
- MW6 Destroyed Groundwater Monitoring Well

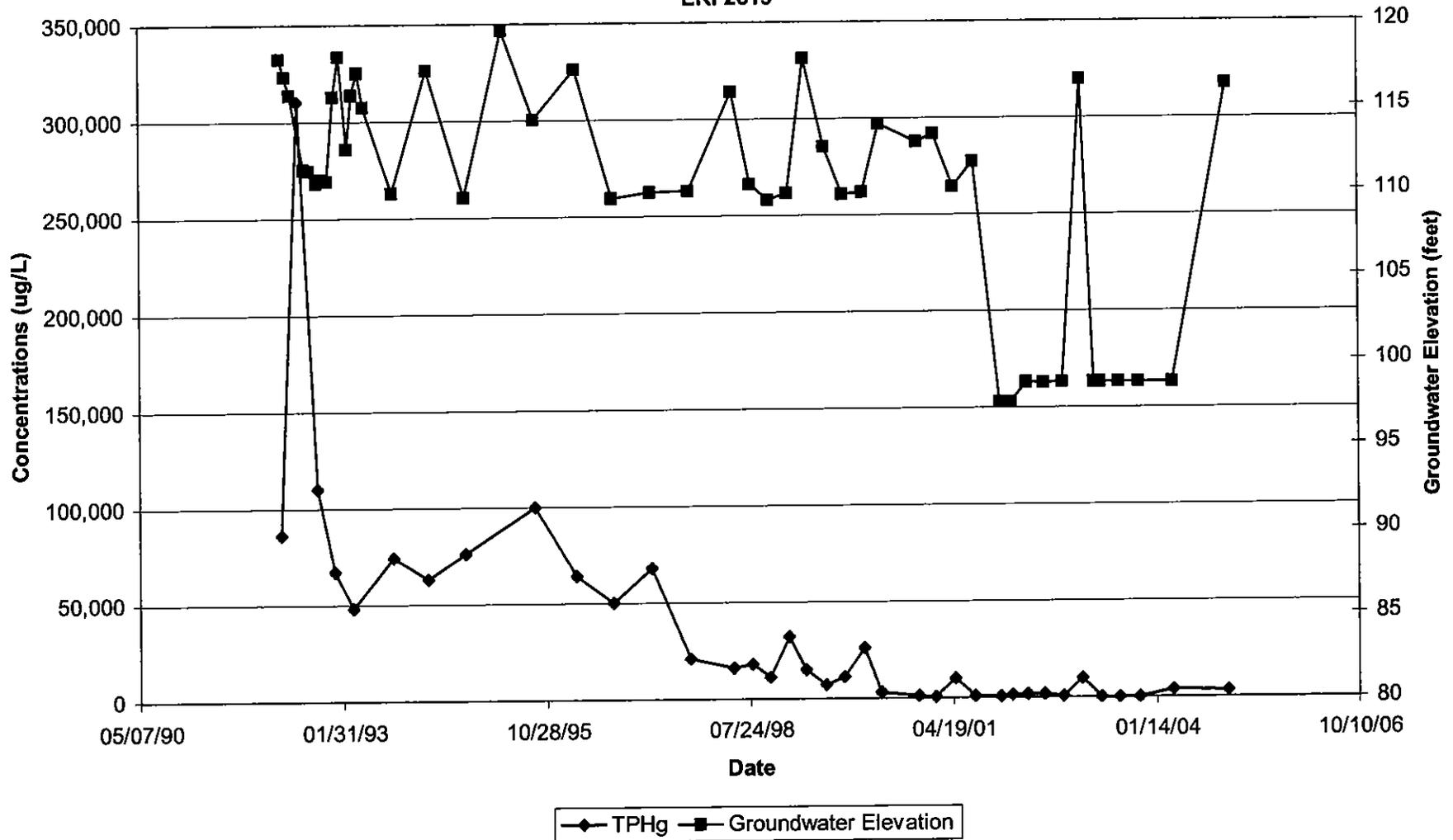
- 2075 Domestic Well
- SVE4 Soil Vapor Extraction Well

PROJECT NO.  
2619

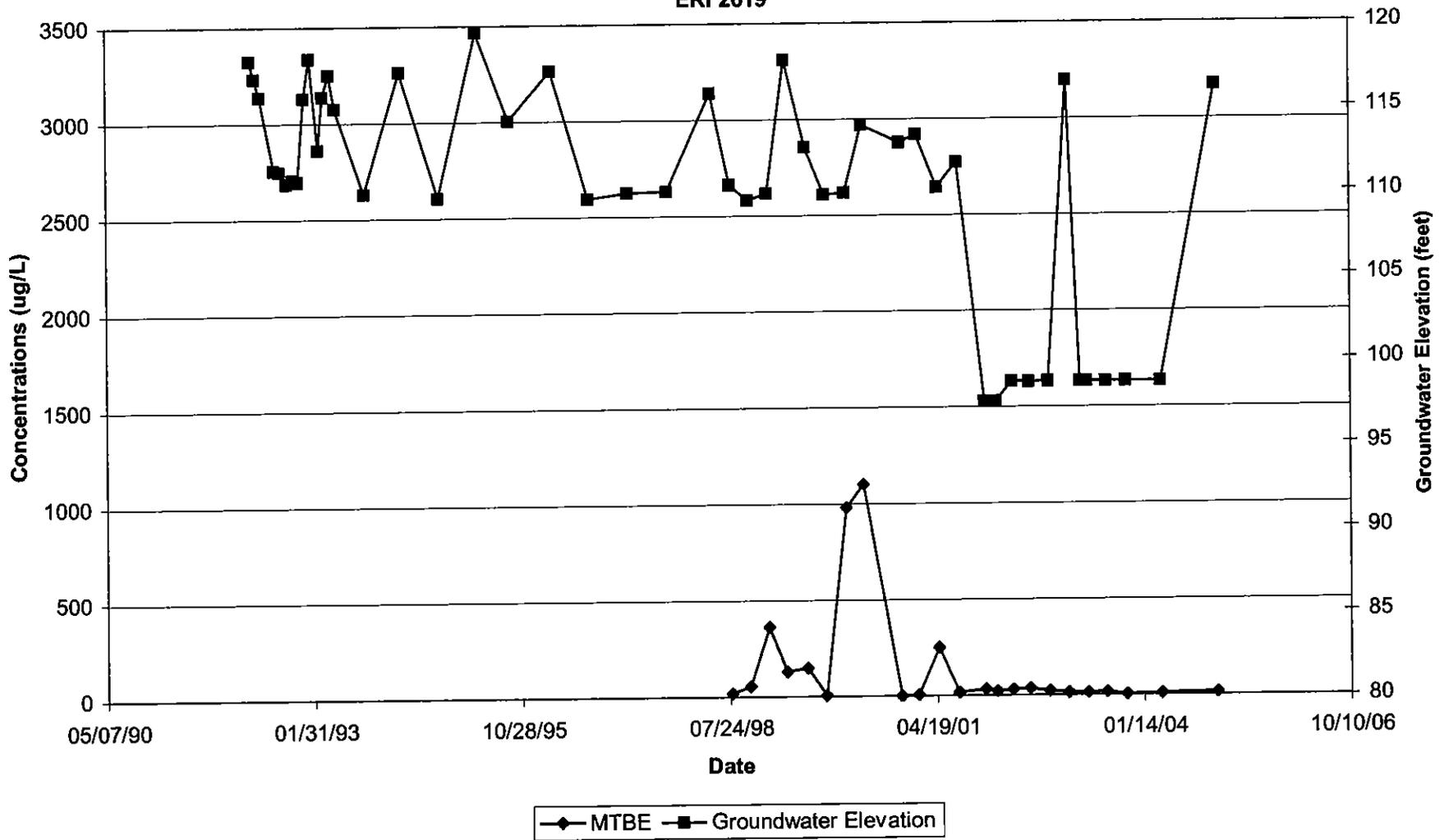
PLATE  
1



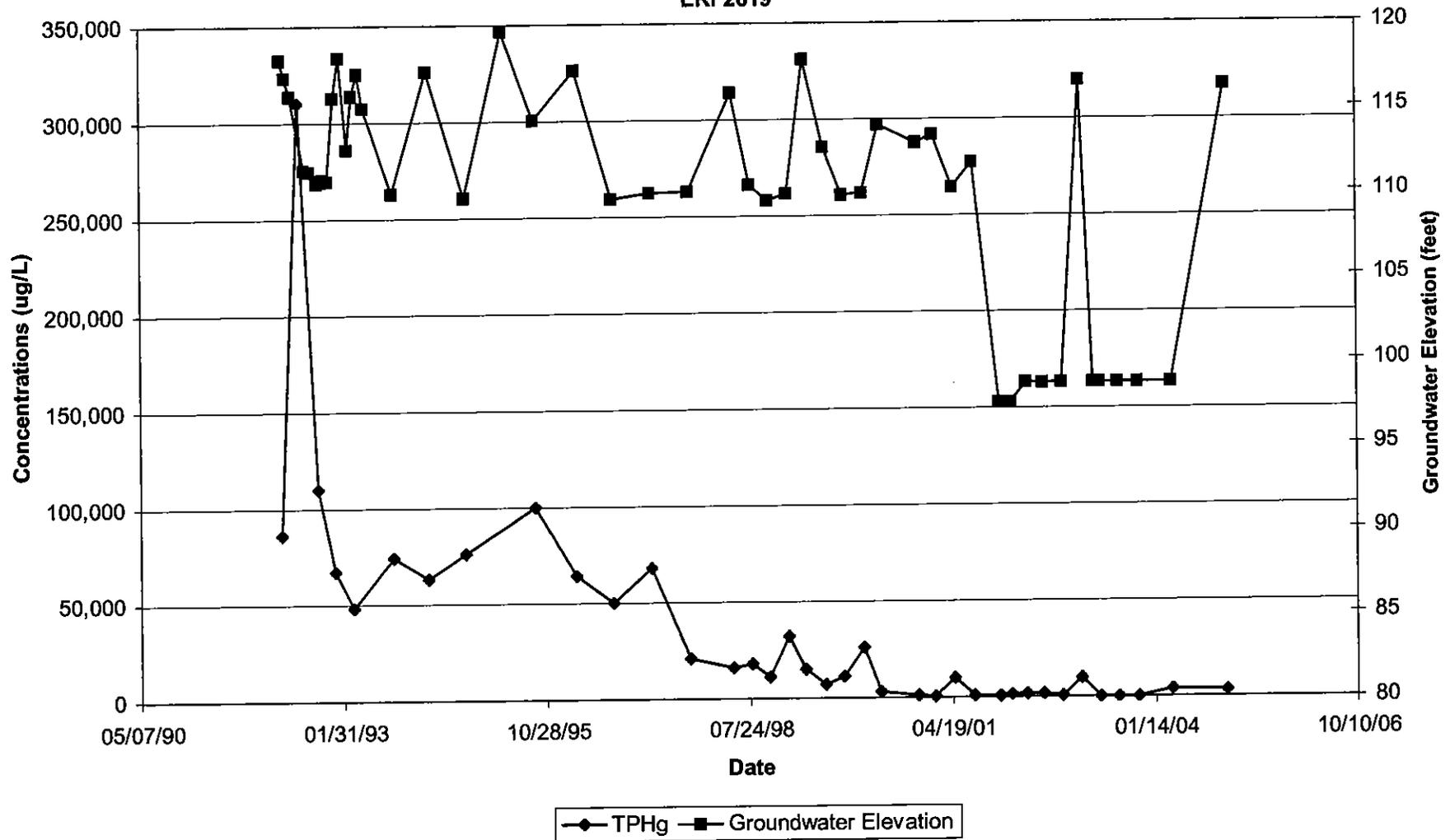
**GRAPH 3**  
**GROUNDWATER CONCENTRATIONS OF TPHg VS. TIME - MW7**  
 Redwood Oil Company Service Station #114  
 1855 Guerneville Road, Santa Rosa, California  
 ERI 2619



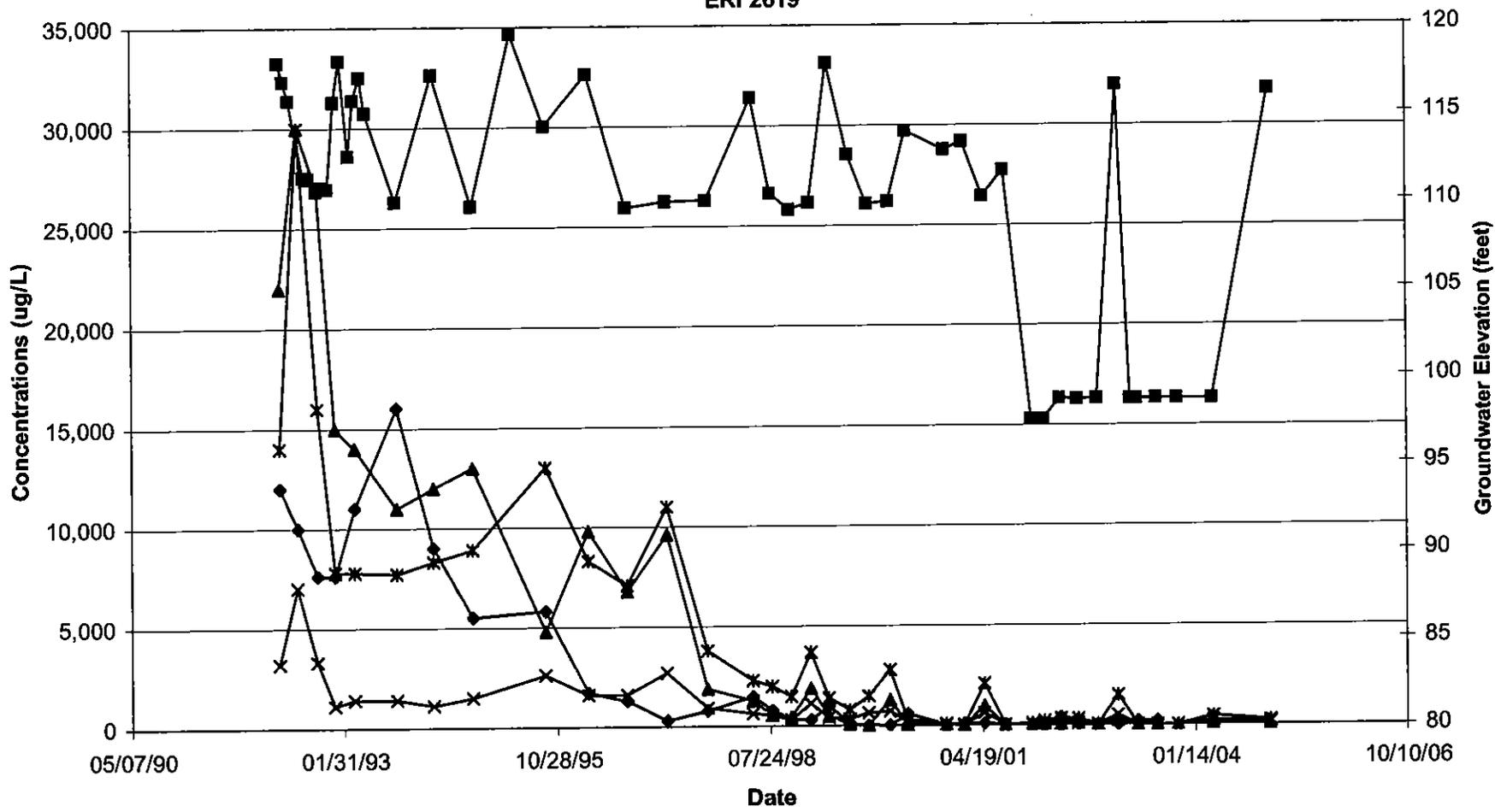
**GRAPH 2**  
**GROUNDWATER CONCENTRATIONS OF MTBE VS. TIME - MW7**  
 Redwood Oil Company Service Station #114  
 1855 Guerneville Road, Santa Rosa, California  
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**GRAPH 3**  
**GROUNDWATER CONCENTRATIONS OF TPHg VS. TIME - MW7**  
 Redwood Oil Company Service Station #114  
 1855 Guerneville Road, Santa Rosa, California  
 ERI 2619



**GRAPH 4**  
**GROUNDWATER CONCENTRATIONS OF BTEX VS. TIME - MW7**  
 Redwood Oil Company Service Station #114  
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Benzene
  Toluene
  Ethylbenzene
  Xylenes
  Groundwater Elevation